REMARKS/ARGUMENTS

Applicants respectfully request reconsideration and allowance of this application in view of the amendments above and the following comments.

Claim 4 was objected to as containing a typographical error in the word "said." In response, Applicants have corrected this error.

Claims 10-14 were rejected under 35 USC § 112, second paragraph, as being indefinite. The Examiner alleges a lack of antecedent basis in claim 10 for "(D)" and "(E)." In response, Applicants point out that claim 10 depends on claim 9, which, in turn, depends on claim 1. Claim 1 already cites "(D)" as a part of the amphiphilic component "(C/D)." Moreover, Applicants have amended claim 1 to provide for optional component (E), thereby providing the necessary antecedent basis for this term. See the last sentence of the third paragraph on page 16 of the instant specification for clear support for (E).

The Examiner also alleges indefiniteness in the term "polyethoxylated C_{13} oxo ($C_{12}/_{14}E_5$)" in claims 10, 12 and 14. In response, Applicants point out that the nomenclature is discussed in the instant specification, for example, in the paragraph bridging pages 17-18. What is meant is a polyethoxylated oxoalcohol containing 5 ethylene oxide units (which correspond to the general formula C_iE_j, wherein j = 5, which means only 5 ethylene oxide units and with 13 carbon atoms as an average value out of 12 and 14 carbon atoms and/or a maximum of 13 carbon atoms in a technical tenside with a mixture of carbon chains of 10-14 C atoms.

Similarly, the Examiner alleges indefinitness in the term "polyethoxylated decanol ($C_{10}E_8$)" in claim 11. In response, Applicants point out that "polyethoxylated decanol $C_{10}E_8$" corresponds to the same general formula C_iE_j, wherein j = 8, i.e. only 8 ethylene oxide units.

Finally, the Examiner also alleges indefiniteness in the term "polyethoxylated C_{13} oxo ($C_{12/14}E_6$)" in claim 13. In response, Applicants point out that by the disclosed convention this means a polyethoxylated oxoalcohol containg 6 ethylene oxide units (which corresponds to the general formula C_iE_j, wherein j = 6, i.e. only 6 ethylene oxide units, with 13 C atoms as an average value out of 12 and 14 C atoms and/or a maximum of 13 C atoms in a technical tenside with a mixture of carbon chains of 12-14 C atoms.

In view of the foregoing, Applicants respectfully submit that the claims are definite. An early notice that this rejection has been reconsidered and withdrawn is, therefore, earnestly solicited.

Claims 1-9, 14, 15 and 18 were rejected under 35 USC § 102(e) as being anticipated by Varadaraj et al. ("Varadaraj I"), US 2003/0170512. In response, Applicants would remind the Examiner that anticipation requires that each and every element as set forth in the claim must be found, either expressly or inherently described, in a single prior art reference, and, further, the absence in the prior art reference of even a single one of the claim elements is sufficient to negate anticipation. *In re Robertson,* 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). Claim 1 has been amended to incorporate a requirement of clause (i) of claim 5 that the emulsion is "thermodynamically stable." Varadaraj I does not

describe thermodynamically stable emulsions and, therefore, cannot anticipate the rejected claims.

Further on this point, Applicants emphasize that there is a clear distinction between the emulsion of Varadaraj and that of the invention of the present application, only the term "bicontinuous" needs to be clarified. Varadaraj I describes mixtures of hydrocarbon in water emulsion and a water-in-hydrocarbon emulsion (see paragraph [0016]). The hydrocarbon-in-water emulsion is obtained by addition of a tenside soluble in the hydrocarbon and the water in hydrocarbon emulsion by addition of a water-soluble tenside (see paragraph [0027]). By addition of such tenside mixture the surface tension between water and hydrocarbon is reduced (see paragraph [0041]) which gives an emulgation while using a low energy input (see paragraphs [0024], [0025]). The end product after emulgation shows the characteristics of a typical instable macro emulsion, the sizes of the structures are in the micrometer range and greater, which is obvious by the detection method via direct optical microscopic measurement (see paragraphs [0045], [0048]). Thus, both emulsions as well as the mixtures of both emulsions are macro emulsions which separate within maximum 72 h in a water phase and a hydrocarbon phase (paragraph [0048]). Thus, the continuous emulsion of Varadaraj I is kinetically stabilized and is thus not the same as the bicontinous one-phase microemulsion of the present invention. The microemulsion of the present invention is a thermodynamically stable, nanostructured and single-phase mixture. "Thermodynamically stable" within the meaning of the present invention refers to an energetic preferred state which is stable for an unlimited period of time, which means the single-phase mixture does not separate in single phases. The size of

the continuous water and hydrocarbon phases is in the nanometer range and these structures are not visible under the microscope.

In view of the foregoing, Applicants respectfully request that the Examiner reconsider and withdraw this rejection. An early notice that this rejection has been reconsidered and withdrawn is earnestly solicited.

Claims 1-9, 15 and 18 were rejected under 35 USC § 102(e) as being anticipated by Varadaraj et al. ("Varadaraj II"), US 2003/0165722. In response, Applicants respectfully submit that Varadaraj II also does not anticipate the emulsion of the rejected claims. As was the case with anticipation rejection based on Varadaraj I, the terms "bicontinuous" and "microemulsion" have to be clarified. First of all, the respective use of the above terms in Varadaraj II is not consistent: claim 1: emulsion composition, whereas claims 2 and 18 refer to microemulsions; claim 5: microemulsion is the bicontinous microemulsion; claims 7, 13, 14, 15, 16, 17: bicontinous microemulsion.

Second, in all cases Varadaraj II refers to a hydrocarbon-in-water emulsion and a water-in-hydrocarbon emulsion (paragraph [0016]), a micro heterogeneous biphasic fluid. The detection is effected – as in Varadaraj I – by optical microscope means (paragraph [0040], [0042]). On the other hand, by the microemulsion of the rejected claims incorporates bicontinuous one-phase microemulsion with nanostructures of alternating water and oil domains which are separated from each other by a tenside film (paragraph [0046]). Under the optical microscope such a microemulsion appears single-phasing and homogeneous, with nanodomains only visible with an electromicroscope. The mixtures of Varadaraj II separate in a aqueous and hydrocarbon phase at least after 72 h (see

paragraphs [0043], [0046]). On the other hand, the instant microemulsion is a thermodynamically stable amino structure single-phase system. Again, thermodynamic stability is an energetic stage which lasts over an unlimited period of time, which means the single-phase mixtures do not separate into constituent phases.

In view of the foregoing, Applicants respectfully request that the Examiner reconsider and withdraw this rejection. An early notice that this rejection has been reconsidered and withdrawn is earnestly solicited.

Claims 1-9, 15, 17 and 18 were rejected under 35 USC § 102(b) as being anticipated by Jakobs et al. ("Jakobs"), *Langmuir, 15:* 6707-6711 (1999). In response, Applicants point out that Jakobs describes the efficiency boosting effect in microemulsions by using block copolymers. The microemulsions have been the subject of research for more than 30 years. The rejected claims are not drawn to microemulsions per se, but, rather, to microemulsions wherein "the hydrophobic component (B) contains one or more substances which can be employed as a fuel." Jakobs does not disclose the particular thermodynamically stable, nanostructurered and single-phase microemulsion of the rejected claims having one or more substances which can be employed as a fuel.

In view of the foregoing, Applicants respectfully request that the Examiner reconsider and withdraw this rejection. An early notice that this rejection has been reconsidered and withdrawn is earnestly solicited.

Claim 12 was rejected under 35 USC § 103(a) as being obvious over Varadaraj I in view of Allgaier et al. ("Allgaier"), US 6677293.

Claim 10 was rejected under 35 USC § 103(a) as being obvious over Varadaraj I in view of Steinmann, US 2003/0037484 ("Steinmann I").

Claim 11 was rejected under 35 USC § 103(a) as being obvious over Varadaraj I in view of Fillippini et al. ("Fillippini"), US 2002/0088167.

Claim 13 was rejected under 35 USC § 103(a) as being obvious over Varadaraj I in view of Fillippini and Steinmann, US 6017368 ("Steinmann II").

Claim 19 was rejected under 35 USC § 103(a) as being obvious over Varadaraj I.

In response to ***all*** of the above-noted obviousness rejections of claims 10-13 and 19 based on Varadaraj I alone or in view of Allgaier, Steinmann I, Fillippini or Fillippini in view of Steinmann II, Applicants respectfully submit that each of these rejections was dependent upon Varadaraj anticipating the basic aspects of the invention, as set forth in claim 1. There is nothing in any of the cited secondary references that overcomes the deficiences of Varadaraj. Specifically, Varadaraj alone or taken in view of Allgaier, Steinmann I, Fillippini or Fillippini in view of Steinmann II still fails to teach a thermodynamically stable bicontinuous one-phase microemulsion as required by the rejected claims.

In view of the foregoing, Applicants respectfully request that the Examiner reconsider and withdraw each of these obviousness rejections. An early notice that these rejections have been reconsidered and withdrawn is earnestly solicited.

Claim 19 was rejected under 35 USC § 103(a) as being obvious over Jakobs. In response, Applicants submit that this rejection was also dependent upon Jakobs

anticipating the basic aspects of the present invention as embodied in claim 1. Since it has been shown above that this is not, in fact, the case, Applicants respectfully submit that Jakobs alone cannot render obvious claim 19. There still is not in Jakobs any teaching or suggestion of a thermodynamically stable bicontinuous one-phase microemulsion as required by claim 19.

In view of the foregoing, Applicants respectfully request that the Examiner reconsider and withdraw each of these obviousness rejections. An early notice that these rejections have been reconsidered and withdrawn is earnestly solicited.

Applicants believe that the foregoing constitutes a bona fide response to all outstanding objections and rejections.

Applicants also believe that this application is in condition for immediate allowance. However, should any issue(s) of a minor nature remain, the Examiner is respectfully requested to telephone the undersigned at telephone number (212) 808-0700 so that the issue(s) might be promptly resolved.

Early and favorable action is earnestly solicited.

Respectfully submitted,
NORRIS MCLAUGHLIN & MARCUS, P.A.

By /Kurt G. Briscoe/

Kurt G. Briscoe
Attorney for Applicant(s)
Reg. No. 33,141
875 Third Avenue - 18th Floor
New York, New York 10022
Phone: (212) 808-0700
Fax: (212) 808-0844